U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

### **SEARCH REQUEST FORM**

Requestor's Name:		Serial Number:	
Date:	Phone:	Art	Unit:
Search Topic: Please write a detailed statement o terms that may have a special mea please attach a copy of the sequence	ning. Give examples or relevent	citations, authors, keywords	, etc., if known. For sequences,
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Date completed: 4/22 Searcher: P. Schreiber	Search 308 - 4792		<b>Vendors</b> IG
Terminal time: 15 Elapsed time: 6		CM-1 6403	STN Dialog
CPU time:  Total time:  Number of Searches:	<del></del>	of Search  N.A. Sequence  A.A. Sequence	APS Geninfo SDC
Number of Searches:  Number of Databases:		Structure Bibliographic	DARC/Questel  Other Compaga

PTO-1590 (9-90)

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#### Schreiber, David

From:

Yu, Misook

Sent:

Monday, April 22, 2002 2:59 PM

To: Subject:

Schreiber, David

t: 09/499,662

#### I have to additional search.

The application claims benefits to two prior abandoned applications, 09/053,583 and 09/408,646. Would you please compare SEQ.ID NO. 50, 52, 54, 109, and 89 of the current application with all of the SEQ ID of the two abondoned applications? I would like to know if the 5 sequences were in the prior applications. Thank you very much.

Examiner Misook Yu, Ph.D. 703-308-2454 (Phone) Art Unit 1642 CM1-8E18 (Room) CM1-8E12 (Mail Box)

For Priority Check

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OTHER INFORMATION: Description of Artificial Sequence: Designed heavy OTHER INFORMATION: chain of humanized anti-Fas antibody
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Length Score Score
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Length Score Score
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470 Mismatches
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US-09-408-646-11 Sequence 117, Application US/09408646A
                                                 2 100% similar sequences to the query sequence were found:
                                                                                                                           470
 470
                                                                                                                                                                                                                                                        **** 2 standard deviations above US-09-408-646-14 Sequence 145, Application 4 US-09-408-646-89 Sequence 89, Application 4 US-09-053-583-89 Sequence 89, Application 4 US-09-408-646-15 Sequence 157, Application 4 US-09-408-646-15 Sequence 157, Application above
                                                                                                                                                                                                                                                             above
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 1. US-09-408-646-11 Sequence 117, Application 2. US-09-053-583-11 Sequence 117, Application
                                                                                                                         3. US-09-408-646-14 Sequence 147, Application 4. US-09-408-646-14 Sequence 143, Application
                                                                                                                                                                                                                                                                                                                                                       US-09-408-646-9 Sequence 9, Application US US-09-053-583-9 Sequence 9, Application US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Serizawa, Nobufusa APPLICANT: Serizawa, Nobufusa APPLICANT: Haruyama, Hidoyuki APPLICANT: Haruyama, Hidoyuki APPLICANT: Tamaki, Ikuko APPLICANT: Takahashi, Tohru TTILE OF INVENTION: Anti-Fas Antibodies FILE REFERENCE: 990540/HG CURRENT APPLICATION NUMBER: US/09/408,646A CURRENT FILING DATE: 1999-09-30 EARLIER PILING DATE: 1999-09-30 NUMBER: OF EQ ID NO 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          # #
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Length Score Score Sig. Frame
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Number of sequences searched:
Number of scores above cutoff:
                                              Pairwise Comparison of Sequences
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scores above cutoff:
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Gap size penalty
Cutoff score
Randomization group
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Threshold level of
Mismatch penalty
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SCORE

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Description

Sequence Name

of of of Number Number Number

Times:

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us-09-499-662-117.res

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SDSYTNYNQKFKGKATLTVDTSTSTAYMELSSLRSEDTAVYYCARNRDYSNNWYFDVWGEGTLVTVSSASTK
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          KAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSK
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Matches = 470 Mismatches
Conservative Substitutions
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US-09-053-583-11 Sequence 117, Application US/09053583A
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GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Ichikawa, Kimihisa
APPLICANT: Obsumi, Jun
APPLICANT: Obsumi, Jun
APPLICANT: Obsumi, Jun
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Shiralshi, Akio
APPLICANT: Toshida, Hiroko
APPLICANT: Toshida, 1901.06
EARLIER REERENCE: 19902/HG
CURRENT FILING DATE: 1997-04-01
EARLIER APPLICATION NUMBER: JP HEI 9-16908B
EARLIER APPLICATION NUMBER: JP HEI 9-16908B
EARLIER APPLICATION NUMBER: JP HEI 9-16008B
EARLIER APPLICATION NUMBER: JP HEI 9-276064
EARLIER PILING DATE: 1997-06-25
EARLIER PILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SEG ID NO 117
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LENGTH

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Mismatches
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US-09-408-646-14 Sequence 147, Application US/09408646A
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APPLICANT: SCRIZAWA, NObifusa
APPLICANT: SCRIZAWA, NObifusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 147
                                                                                                                                                                                                                                                                                           400
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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                              | 10 | 300 | 310 | 350 | 350 | 360 | 350 | 360 | 350 | 360 | 350 | 360 | 350 | 360 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 |
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Mismatches
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Matches = 469
Conservative Substitutions
   190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 143, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serlizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Tohru
TTLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1998-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 143
LENGTH: 470
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US-09-408-646-14 Sequence 143, Application
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170
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OTHER INFORMATION:
160
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Residue Identity
Gaps
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90 300 310 320 330 340 350 360 SHEDPEVKPINYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS
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Mismatches
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US-09-408-646-14 Sequence 145, Application US/09408646A
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Matches = 468
Conservative Substitutions
                                                                                             260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 145, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Tohru
TITLE OF INVEWTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1990-09-30
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 145
LENGTH: 470
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GTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD
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MGWSCIILFILVATATGV4SQVQLVQSGAEVKKPGASVKVSCKASGYTFTSYWMQWVKQAPGQGLEWMGEIDP
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                                                                           260
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GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Berizawa, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Tawahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1988-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 89
LENGTH: 470
                                                                                                                                                                                                                             400
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US-09-408-646-89 Sequence
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Residue Identity
Gaps
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VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS

VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS

VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS

300 310 320 330 340 350 360
               GPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSL
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Mismatches
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Matches = 468
Conservative Substitutions
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APPLICANT: Serizawa, Kimihisa
APPLICANT: Ohtsumi, Jun
APPLICANT: Ohtsumi, Jun
APPLICANT: Ohtsumi, Jun
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Shiraishi, Akio
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Minoko
APPLICANT: Yoshida, Minoko
APPLICANT: Yonehara, Shin
TILE OF INVERTION Anti-Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT APPLICATION NUMBER: JP HEI 9-82953
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTHARE: Patentin Ver: 2.0
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US-09-053-583-89 Sequence
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Residue I
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220 230 240 250 260 270 280 GTQTYICHVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD
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= 465 Mismatches
Substitutions
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                                                                                                                                                                                                                                           410
                                                           190
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Hakahara, Kaori
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 157
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US-09-408-646-15 Sequence 157, Application
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Matches
Conservative S
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98%
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ORGANISM: Artificial
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FEATURE:

OTHER

LENGTH:

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90 300 310 320 330 340 350 360 SHEDPEVKPINYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SDSYTNYNQKFKGKATLTVDTSTSTAYMELSSLRSEDTAVYYCARNRDYSNNWYFDVWGEGTLVTVSSASTK
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Mismatches
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Matches = 332
Conservative Substitutions
                                                                         190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 9, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamata, Ikuko
APPLICANT: Tamati, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER FILING DATE: 1999-09-30
EARLIER FILING DATE: 1999-09-30
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70%
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KAKGOPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGOPENNYKTTPPVLDSDGSFFLYSK
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 210
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Mismatches
 200
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US-09-053-583-9 Sequence 9, Application US/09053583A
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Matches = 332
Conservative Substitutions
 190
                                                                                       260
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APPLICANT: Serizawa, Nobufusa
APPLICANT: Ichikawa, Kimihisa
APPLICANT: Oltsuki, Masahiko
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Akio
APPLICANT: Shiraishi, Akio
APPLICANT: Wombara, Hiroko
APPLICANT: Wombara, Bhin
TILE REFERENCE: 980126/HG
CURRENT FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: JP HEI 9-169088
EARLIER PILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTWARE: Patentin Ver: 2.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Initial Score
Residue Identity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ID NO 9
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| 30 | 30 | 310 | 320 | 330 | 340 | 350 | 360 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        150 160 170 180 190 200 210 GPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSSVVTVPSSSL
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Query sequence being compared:US-09-499-662-107 Number of sequences searched: Number of scores above cutoff:

Fast Pairwise Comparison of Sequences

5.4

Release

FastDB

IntelliGenetics

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made by

Results file us-09-499-662-107.res

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Sig. Frame
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                                                                                                                     442000011
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                                                                   Init. Opt.
Length Score Score
                                                                                                                      233
234
234
233
233
233
233
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Mismatches
 238
                                                                                                             mean
                                                                                                                                                                                                                                                       US-09-499-662-107 (1-238)
US-09-408-646-10 Sequence 107, Application US/09408646A
 238
                                                                                                          above
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Optimized Score = 238
Matches = 238
Conservative Substitutions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
1. US-09-408-646-10 Sequence 107, Application 2. US-09-053-583-10 Sequence 107, Application
                                                                                                                    3. US-09-408-646-50 Sequence 50, Application
4. US-09-053-583-50 Sequence 50, Application
5. US-09-408-646-10 Sequence 109, Application
6. US-09-048-646-52 Sequence 52, Application
7. US-09-053-583-10 Sequence 109, Application
8. US-09-053-583-12 Sequence 52, Application
9. US-09-408-646-12 Sequence 129, Application
10. US-09-408-646-54 Sequence 54, Application
                                                                                                                                                                                                                                                                                                                  APPLICANT: Serizawa, Nobufusa APPLICANT: Haruyama, Hideyuki APPLICANT: Haruyama, Hideyuki APPLICANT: Haruyama, Hideyuki APPLICANT: Nakahara, Kaori, APPLICANT: Tamaki, Ikuko APPLICANT: Tamaki, Ikuko APPLICANT: Takahashi, Tohru TITLE OF INVENTION: Anti-Fas Antibodies FILE REFERENCE: 990540/HG CURRENT PPLICATION NUMBER: US/09/408,646A CURRENT FILING DATE: 1999-09-30

EARLIER APPLICATION NUMBER: UP 10-276881

EARLIER FILING DATE: 1998-09-30

NUMBER OF SEQ ID NOS: 165
                                                                                                        **** 2 standard deviations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  110
                                                                                                                                                                                                                                                                                                Sequence 107, Application US/09408646A
                                         The list of other best scores is:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100
                                                                                 Description
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100%
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Initial Score Residue Identity Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 238
                                                                                 Sequence Name
                                                                               sdavid on Mon 22 Apr 102 14:25:09-PDT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Init. Opt.
Length Score Score Sig. Frame
                                                                                                                                                                       Results of the initial comparison of US-09-499-662-107 (1-238) with: File: yu662.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     238
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              185
                                                                                                                    (1-238)
87
87
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Joining penalty Window size

1.00

Similarity matrix
Threshold level of si
Mismatch penalty
Gap penalty
Gap size penalty
Cutoff score
Randomization group

K-tuple

PAM-150 168

sim.

PARAMETERS

STATISTICS

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Median 7

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Scores:

Times:

159

132

106

-62

53

-5

=~°

SCORE

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50-

100-

The scores below are sorted by initial score. Significance is calculated based on initial score.

sednences

2 100% identical

Description

Sequence Name

9504 87 87

residues: sequences searched: scores above cutoff:

of of

Number Number Number

00:00:00

2.24

130

120

190

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YAASNLESGIPDRFSGSGSGTDFTLT1SRLEPEDFAVYYCQQSNEDPRTFGQGTKLEIKRTVAAPSVF1FPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
                                                                                                                                                                                                                                                                                                Optimized Score = 237 Significance
Matches = 235 Mismatches
Conservative Substitutions
             TITLE OF INVENTION: Anti-Fas Antibodies FILE REPRENCE: 990540/HBC CURRENT APPLICATION NUMBER: US/09/408,646A CURRENT FILING DATE: 1999-09-30 EARLIER APPLICATION NUMBER: UP 10-276881 EARLIER FILING DATE: 1998-09-30 NUMBER OF SEQ ID NOS: 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 50, Application US/09053583A
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100
                                                                                                                                                                                                        ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Serizawa, Nobufusa
APPLICANT: Takahashi, Tohru
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   237
98%
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90
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                                                                                                                                                                     LENGTH: 238
                                                                                                                                                                                       TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY
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0
0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Optimized Score = 238 Significance
Matches = 238 Mismatches
Conservative Substitutions
           2. US-09-499-662-107 (1-238)
US-09-053-583-10 Sequence 107, Application US/09053583A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-499-662-107 (1-238)
US-09-408-646-50 Sequence 50, Application US/09408646A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               190
                                                            Sequence 107, Application US/09053583A
GENERAL INFORMATION:
APPLICANT: Serizawa, Klmihisa /
APPLICANT: Ichikawa, Klmihisa /
APPLICANT: Obtsuki, Masahiko /
APPLICANT: Obtsuki, Masahiko /
APPLICANT: Haruyama, Hideyuki /
APPLICANT: Takahashi, Tohrur /
APPLICANT: Yoshida, Hiroko /
APPLICANT: Yoshida, Hiroko /
APPLICANT: Shiraishi, Akio /
APPLICANT: Yonehara, Shin /
TITLE OF INVENTION: Anti-Fas Antibodies FILE REPERENCE, 9810-05/HG CURRENT APPLICATION NUMBER: US/09/053,583A CURRENT FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: JP HEI 9-16908 EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTWARE: PATENTING DATE: 1997-10-08
LENGTH: 238
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               170
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100%
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4. US-09-499-662-107 (1-238)
US-09-053-583-50 Sequence 50, Application US/09053583A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Serizawa, Nobulusa APPLICANT: Chikawa, Kimihisa APPLICANT: Ohsumi, Jun APPLICANT: Ohsumi, Jun APPLICANT: Ohsumi, Jun APPLICANT: Takahashi, Tohru APPLICANT: Takahashi, Tohru APPLICANT: Takahashi, Tohru APPLICANT: Yoshida, Hiroko APPLICANT: Yoshida, Hiroko APPLICANT: Shida, Alioko APPLICANT: Yonehara, Shin TILE OF INVENTION: Anti-Fas Antibodies FILE REFERNE: 980126/HG CURRENT APPLICATION NUMBER: US/09/053,583A CURRENT FILING DATE: 1998-04-01 EARLIER FILING DATE: 1997-06-25 EARLIER FILING DATE: 19
```

Sequence 50, Application US/09408646A GENERAL INFORMATION: APPLICANT: Serlzawa, Nobufusa APPLICANT: Haruyama, Hideyuki APPLICANT: Nakahara, Kaori APPLICANT: TAMAKI, Ikuko

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(AASNLESGIPDRFSGSGSGTDFTLTIHPVEEEDAATYYCQQSNEDPRTFGQGTKLEIKRTVAAPSVFIFPP
80 130 140
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US-09-053-583-10 Sequence 109, Application US/09053583A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 52
                                                                                                                                                         220
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6
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                                                 OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Designed light
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Optimized Score = 234 Significance
Matches = 232 Mismatches
Conservative Substitutions
                                                                                                       237 Significance
235 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 130
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US-09-408-646-10 Sequence 109, Application US/09408646A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION: chain of humanized anti-Fas antibody
                                                                                                     Optimized Score = 237
Matches = 235
Conservative Substitutions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 109, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serlizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tanaki, Tkuko
APPLICANT: Tanaki, Tvhru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
                                                                                                                                                                                                                                                                               110
                                                                                                                                                                                                                                                                               100
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978
0
                                                                                                     237
98%
TYPE: PRT
ORGANISM: Artificial
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Residue Identity
Gaps
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Residue Identity
                                     FEATURE
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X 10 20 30 40 50 60 70 METDTILLMVLLLMVPGSTGEIVLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMNWYQQKPGQAPRLLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Significance
Mismatches
                                                                                                                                                                                                     52, Application US/09408646A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Optimized Score = 234
Matches = 230
Conservative Substitutions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                         APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
                                                                                                                                                                                                                              Sequence 52, Application US/09408646A GENERAL INFORMATION:
                                                                                                                                                                                     US-09-499-662-107 (1-238)
US-09-408-646-52 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACEVTHQGLSSPVTKSFNRGEC 220 X
                                                                                        220 230 X
ACEVTHQGLSSPVTKSFNRGEC
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96%
0
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OTHER INFORMATION:
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                                                                                       230
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Initial Score
Residue Identity
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Sequence 109, Application US/09053583A

APPLICANT: Serizawa, Nobufusa
APPLICANT: Serizawa, Nimihisa
APPLICANT: Ichikawa, Kimihisa
APPLICANT: Ichikawa, Kimihisa
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Hiroko
APPLICANT: Yonehara, Shin
TILE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT FILLING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: JP HEI 9-169086
EARLIER FILLNG DATE: 1997-04-01
EARLIER FILLNG DATE: 1997-06-25
EARLIER APPLICATION NUMBER: JP HEI 9-169086
EARLIER FILLNG DATE: 1997-10-08
NUMBER OF SEO ID NOS: 123
SOFTWARE PALENTIN VOS: 123
SOFTWARE PALENTIN VOS: 123

ORGANISM: Artificial Sequence

SEQ ID NO 109 LENGTH: 238

234 978 0

Initial Score Residue Identity

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FEATURE: OTHER INFORMATION: Description of Artificial Sequence: Designed light
                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9. US-09-499-662-107 (1-238)
US-09-408-646-12 Sequence 129, Application US/09408646A
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                         CURRENT APPLICATION NUMBER: US/09/053,583A CURRENT FILING DATE: 1998-04-01 EARLIER APPLICATION NUMBER: US/09/053,583A CURRENT FILING DATE: 1997-04-01 EARLIER FILING DATE: 1997-04-01 EARLIER FILING DATE: 1997-06-10 EARLIER FILING DATE: 1997-06-25 EARLIER FILING DATE: 1997-10-08 EARLIER FILING DATE: 1997-10-08 NUMBER OF SEQ ID NOS: 123 SOFTWARE: PATENTIN Ver. 2.0 SEQ ID NO 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 129, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tananki, Ikuko
APPLICANT: Tananki, Ikuko
APPLICANT: Tahanki, Ikuko
APPLICANT: Tahashi, Tohuu
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990400/HG
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: UP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
TITLE OF INVENTION: Anti-Fas Antibodies FILE REFERENCE: 980126/HG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            30
                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100
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968
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                                                                                                                                                                                                                                                                                                                                                                               Initial Score
Residue Identity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           234 Significance
232 Mismatches
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US-09-053-583-52 Sequence 52, Application US/09053583A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Optimized Score - 234
Matches - 232
Conservative Substitutions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
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110

100

Sequence 52, Application US/09053583A GENERAL INFORMATION:

ZZO ZZO ZZO ZZO X ACEVTHQGLSSPVTKSFNRGEC  APPLICANT: Serizawa, Nobulusa APPLICANT: Serizawa, Kimihisa APPLICANT: Obsumi, Jun APPLICANT: Ohsuwi, Masahiko APPLICANT: Haruyama, Hideyuki APPLICANT: Taruyama, Hideyuki APPLICANT: Shiraishi, Hiroko APPLICANT: Shiraishi, Akio

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80 90 100 110 120 130 140 XAASNLESGIPDRESGSGSGTDFTLTISRLEPEDFAVYXCQOSNEDPRIFGGGTKLEIKRTVAAPSVFIFPP
                                                                                                                                                                                                                          150 160 170 180 190 200 210 SDEQLKSGTASVVCLLNNFYPREAKVQWRVDNALQSGNSQESVJEQDSKDSTJSJTJTLSKADYEKHKVY
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                                 Significance
Mismatches
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Matches = 228 Mismatches
Conservative Substitutions
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US-09-408-646-54 Sequence 54, Application US/09408646A
OTHER INFORMATION: chain of humanized anti-Fas antibody
                               Optimized Score = 233
Matches = 222
Conservative Substitutions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 54, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Harayama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: 184086, 1000, 400 TITLE OF INVERTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408, 646A
CURRENT FILING DATE: 1998-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1988-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 54
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ACEVTHOGLSSPVTKSFNRGEC
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OTHER INFORMATION:
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Residue Identity
Gaps
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us-09-499-662-50.res

Query sequence being compared:US-09-499-662-50 Number of sequences searched:

50-

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SECENCES

100

Sednences

FastDB - Fast Pairwise Comparison of

Release 5.4

IntelliGenetics

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Results file us-09-499-662-50.res made

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Frame
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25
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Length Score Score
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234
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Mismatches
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                                                                                           US-09-499-662-50 (1-238)
US-09-408-646-50 Sequence_50, Application US/09408646A
 238
                                                                                                 above
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Matches = 238
Conservative Substitutions
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                                                                                                        3. US-09-408-646-10 Sequence 107, Application 4. US-09-053-583-10 Sequence 107, Application 5. US-09-408-646-10 Sequence 109, Application 6. US-09-408-646-54 Sequence 54, Application 7. US-09-408-646-52 Sequence 52, Application 8. US-09-053-581-10 Sequence 54, Application 9. US-09-053-583-54 Sequence 54, Application 0. US-09-053-583-54 Sequence 52, Application 0. US-09-053-583-52 Sequence 52, Application 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190
                                                                                                 **** 2 standard deviations
                                                                                                                                                                                                                                                                                            APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tawakia, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Pas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 50
LENGTH: 238
Application
Application
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
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Sequence 50,
Sequence 50,
                                      18:
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ORGANISM: Artificial Sequence
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                                      The list of other best scores
                                                                          Description
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1008
0
1. US-09-408-646-50
2. US-09-053-583-50
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Residue Identity
Gaps
                                                                          Sequence Name
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE
                                                                                                             sdavid on Mon 22 Apr 102 16:28:57-PDT.
                                                                                                                                                          Results of the initial comparison of US-09-499-662-50 (1-238) with: File: yu662.pep
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87
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STATISTICS

SEARCH

Median 7

Mean 46

Scores

Times:

9504 87 87

sequences searched: scores above cutoff:

residues:

of of

Number Number Number

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1.00 0.05 0

Gap size penalty Cutoff score Randomization group

Gap penalty

K-tuple

PAM-150 16%

sim.

Similarity matrix Threshold level of Mismatch penalty

PARAMETERS

132

106

<del>- 6</del>2

56

-50

SCORE (STDEV

2 100% identical sequences to the query sequence were found:

Description Sequence Name

Opt. Score Sig. Frame Init. Length Score

Seguence 50, Application US/09053583A

SENERAL INFORMATION:

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SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Optimized Score - 237 Significance - 2.24
Matches - 235 Mismatches - 1
Conservative Substitutions - 2
                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
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US-09-053-583-10 Sequence 107, Application US/09053583A
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GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Ichikawa, Kimihisa
APPLICANT: Ohsumi, Jun
APPLICANT: Ohsumi, Jun
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Hiroko
APPLICANT: Yonehara, Shin
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERNE: 980126/HG
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT FILING DATE: 1998-04-01
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-00-08
NUMBER OF SEQ ID NOS: 123
SOFTWARE: PATCHIN Ver. 2.0
SEQ ID NO 107
LENGTH: 238
APPLICANT: Takahashi, Tohru TITLE OF INVENTION: Anti-Fas Antibodies FILE REFRENCE: 990540/HG CURRENT APPLICATION NUMBER: US/09/408,646A CURRENT FILING DATE: 1999-09-30 EARLIER APPLICATION NUMBER: JP 10-276881 EARLIER FILING DATE: 1998-09-30 NUMBER OF SEQ ID NOS: 165 SEQ ID NOIN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          110
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988
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                METDIILLWVLLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMNWYQQKPGQAPRLLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Optimized Score = 238 Significance
Matches = 238 Mismatches
Conservative Substitutions
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US-09-408-646-10 Sequence 107, Application US/09408646A

    US-09-499-662-50 (1-238)
    US-09-053-583-50 Sequence 50, Application US/09053583A

                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT PELICATION NUMBER: US/09/053,583A
CURRENT FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: UP HEI 9-8253
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25
                                                                                                                                                                APPLICANT: Serizawa, Nobufusa
APPLICANT: Serizawa, Kimihisa
APPLICANT: Obsumi, Jun
APPLICANT: Obsumi, Jun
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida Hiroko
APPLICANT: Yoshida Hiroko
APPLICANT: Yoshida Akio
APPLICANT: Yoshida Akio
APPLICANT: Yoshida Akio
APPLICANT: Sonida Akio
```

Optimized Score Matches

238 100% 0

Initial Score Residue Identity

170

ORGANISM: Artificial Sequence

PatentIn Ver. 2.0

SEQ ID NO 50 LENGTH: 238 SOFTWARE:

Sequence 107, Application US/09408646A GENERAL INFORMATION: APPLICANT: Serlzawa, Nobufusa APPLICANT: Haruyama, Hideyuki APPLICANT: Nakahara, Kaori APPLICANT: Tamaki, Ikuko

ACEVTHQGLSSPVTKSFNRGEC 220 X330 X

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ACEVIHQGLSSPVIKSFNRGEC

us-09-499-662-50.res

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YAASNLESGIPDRFSGSGSGTDFTLTIHPVEEEDAATYYCQQSNEDPRTFGQGTKLEIKRTVAAPSVFIFPP
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US-09-408-646-52 Sequence 52, Application US/09408646A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
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                                                                                    2.24
                                           Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody
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Mismatches
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US-09-408-646-10 Sequence 109, Application US/09408646A
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                                                                                    237
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APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER RPLICATION UMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
                                                                                      11 11
                                                                                   Optimized Score
Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 109, Application US/09408646A GENERAL INFORMATION:
                                                                                                                                                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100
                                                                                                                                                                                                                                                                                                                                                                                                      220 230 X
ACEVTHQGLSSPVTKSFNRGEC
                                                                                                                                                                                                                                                                                                                                                                                                                               ACEVTHQGLSSPVTKSFNRGEC
                                                                                   237
98%
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 234
96%
0
TYPE: PRT
ORGANISM: Artificial
                                                                                                                                                                                                                            90
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION:
OTHER INFORMATION:
                                           OTHER INFORMATION:
                                                        OTHER INFORMATION:
                                                                                 Initial Score
Residue Identity
Gaps
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Residue Identity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80
                          FEATURE:
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5

YAASNLESGIPDRFSGSGGTDFTLTISRLEPADFAVYYCQQSNEDPRTFGQGTRLEIKRTVAAPSVFIFPP 

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2.20
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Optimized Score = 234 Significance
Matches = 229 Mismatches
Conservative Substitutions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         130
                                                                                                                                                                                US-09-499-662-50 (1-238)
US-09-408-646-54 Sequence 54, Application US/09408646A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                               APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
BARLIER RPLICATION NUMBER: JP 10-276881
BARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110
                                                                                                                                                                                                                       Sequence 54, Application US/09408646A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220 230 ACEVTHQGLSSPVTKSFNRGEC
                                                                                                            ACEVTHQGLSSPVTKSFNRGEC
220 230 X
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ACEVTHQGLSSPVTKSFNRGEC
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96%
0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Residue Identity
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 54
LENGTH: 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Initial Score
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2.20

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YAASNLESGIPDRFSGSGSGTDFTLTISRLEPADFAVYYCQQSNEDPRTFGQGTRLEIKRTVAAPSVFIFPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Description of Artificial Sequence: Designed light
                                                                                                                                                                                                       OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
                                                                                                                                                                                                                                                                         Optimized Score = 234 Significance = Matches = 229 Mismatches = Conservative Substitutions =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-499-662-50 (1-238)
US-09-053-583-54 Sequence 54, Application US/09053583A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Chikawa, Kimihisa APPLICANT: Chikawa, Kimihisa APPLICANT: Obsumi, Jun APPLICANT: Obsumi, Jun APPLICANT: Obsumi, Jun APPLICANT: Haruyama, Hideyuki APPLICANT: Takahashi, Tohru APPLICANT: Takahashi, Tohru APPLICANT: Shiraishi, Akio APPLICANT: Shoshida, Hiroko APPLICANT: Yonehara, Shin TITLE OF INVENTION: Anti-Fas Antibodies FILE REFERENCE: 980126/HG
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT RILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
NUMBER OF SEQ ID NOS: 123
  HEI 9-276064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 54, Application US/09053583A GENERAL INFORMATION: APPLICANT: Serizawa, Nobufusa
                  EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 109
LENCTH: 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100
  EARLIER APPLICATION NUMBER: JP
                                                                                                                                         TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220 230 X ACEVTHOGLSSPVTKSFNRGEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACEVTHQGLSSPVTKSFNRGEC
                                                                                                                                                                                                                                                                            234
968
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                                                                                                                                                                                                                                                                              Initial Score Residue Identity Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 54
LENGTH: 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YAASNLESGIPDRFSGSGSGTDFTLTISRLEPADFAVYYCQQSNEDPRTFGQGTRLEIKRTVAAPSVFIFPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Significance
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8. US-09-499-662-50 (1-238)
US-09-053-583-10 Sequence 109, Application US/09053583A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         234
231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative Substitutions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 109, Application US/09053583A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Chikawa, Kimihisa
APPLICANT: Ohsumi, Jun
APPLICANT: Ohsumi, Jun
APPLICANT: Ohsuwi, Junsahiko
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Yonehara, Shin
TITLE OF INVENITON: Anti-Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT PILING DATE: 1998-04-01
EARLIER FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: JP HEI 9-82953
EARLIER APPLICATION NUMBER: JP HEI 9-82953
EARLIER APPLICATION NUMBER: JP HEI 9-82953
                                   APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Optimized Score =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        110
Sequence 52, Application US/09408646A
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial Sequence
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220 230 X ACEVTHQGLSSPVTKSFNRGEC 

230

234 978 0

Initial Score Residue Identity Gaps

SEQ ID NO 52 LENGTH: 238

TYPE: PRT

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X   10   20   30   40   50   60   70   80   90   100   110   120   130   140	YASNLESGIPDRESGSGGTPFTLTHPVEEEDAATYCQQSNEDPRTFGGGTRLEIKRTVAAPSFFIFPP 80 90 110 120 130 140 150 160 170 180 190 200 210 SDEQIKSGTASVVCLLNNFYPREAKVQMKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY	SDEQLKSGTASVVCLLANFYPREAKVQMKVDNALQSGNSQESVTEQDSKDSTLTLSKADDERHKVY 150 160 170 180 210 220 230 X ACEVTHQGLSSPVTKGFNRGEC	ACEVTHQGLSSEVTKSFNRGEC 220 X								
OTHER INFORMATION: chain of humanized anti-Fas antibody  Initial Score = 234 Optimized Score = 234 Significance = 2.20 Residue Identity = 96% Matches = 8  Gans	x 10 20 30 40 50 60 60 40 40 60 60 60 40 60 60 60 60 60 60 60 60 60 60 60 60 60	80 100 110 120 130 140  YAASNLESGIPDRFSGSGGTDFTLTISRLEPADFAVYXCQQSNEDPRTFGGGTRLEIKRTVAAPSVFIFPP	150 160 170 180 190 200 210 SDEQLKSGTASVVCLLNNFYPREAKYQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY	220	10. US-09-499-662-50 (1-238) US-09-053-583-52 Sequence 52, Application US/09053583A	Sequence 52, Application US/09053583A GENERAL INFORMATION: APPLICANT: Serizawa, Nobufusa APPLICANT: Ichikawa, Kimihisa APPLICANT: Ohsumi, Jun APPLICANT: Ohsumi, Jun APPLICANT: Takaushi, Tohru APPLICANT: Takahashi, Tohru APPLICANT: Yoshida, Hiroko APPLICANT: Yoshida, Hiroko APPLICANT: Shiraishi, Akio APPLICANT: Hoshida, Akio APPLICANT: Shiraishi, Akio APPLICANT: Hoshida, Akio APPLICANT: Hoshida, Akio APPLICANT: Hoshida, Akio	CURRENT APPLICATION NUMBER: US/09/053,583A CURRENT FILING DATE: 1998-04-01 EARLIER APPLICATION NUMBER: JP HEI 9-82953 FARTIER FILING DATE: 1997-04-01	EARLIER APPLICATION NUMBER: JP HEI 9-169088  EARLIER FILING DATE: 1997-06-25  EARLIER APPLICATION NUMBER: JP HEI 9-276064  EARLIER FILING DATE: 1997-10-08  NUMBER OF SEO ID NOS: 123	SOFTWARE: Patentin Ver. 2.0 SEQ ID NO 52 TYPE: PRT ORGANISM: Artificial Sequence	FEATURE: OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody	Initial Score = 234 Optimized Score = 234 Significance = 2.20 Residue Identity = 97% Matches = 231 Mismatches = 7 Gaps = 0 Conservative Substitutions = 0

us-09-499-662-52.res

```	
Of 10 IntelliGenetics	1. US-09-408-646-52 Sequence 52, Application 238 238 238 23.24 0 2. US-09-053-583-52 Sequence 52, Application 238 238 238 2.24 0
FastDB - Fast Pairwise Comparison of Sequences Release 5.4	4 100% similar sequences to the query sequence were found:
Results file us-09-499-662-52.res made by sdavid on Mon 22 Apr 102 16:29:45-PDT.	Init. Opt. Sequence Name Description Length Score Sig. Frame
Query sequence being compared:US-09-499-662-52 (1-238) Number of sequences searched: Number of scores above cutoff:	3. US-09-408-646-10 Sequence 109, Application 238 238 238 2.24 0 4. US-09-053-583-10 Sequence 109, Application 238 238 238 2.24 0 5. US-09-053-583-54 Sequence 54, Application 238 238 238 2.24 0 6. US-09-408-646-54 Sequence 54, Application 238 238 238 2.24 0
Results of the initial comparison of US-09-499-662-52 (1-238) with: File: yu662.pep	The list of other best scores is:
100-	Sequence Name Description Length Score Store Frame
ND X 00 - 00 - 00 - 00 - 00 - 00 - 00 - 0	ro
	1. US-09-499-662-52 (1-238) US-09-408-646-52 Sequence 52, Application US/09408646A
W M O D M Z O	Sequence 52, Application US/09408646A GENERAL INFORMATION: APPLICANT: Serizawa, Nobufusa APPLICANT: Haruyama, Hideyuki APPLICANT: Nakahara, Kaori APPLICANT: Tamaki, Ikuko APPLICANT: Takahashi, Tohru
SCORE 0  26 53 79   106 132 159 185 212 238	TITLE OF INVENTION: Anti-Fas Antibodies FILE REFERENCE: 990540/HG CURRENT APPLICATION UNMER: US/09/408,646A CURRENT FILING DATE: 1999-09-30 EARLIER APPLICATION NUMBER: JP 10-276881
PARAMETERS	EARLIER FILING DATE: 1998-09-30 NUMBER OF SEQ ID NOS: 165 SEQ ID NO 52
Similarity matrix PAM-150 K-tuple 2 Threshold level of sim. 16% Mismatch penalty 1.00 Gap penalty 1.00 Window size 32 Gap star penalty 0.05 Cutoff some	LENGIN: 238 TYPEL: PRT ORGANISM: Artificial Sequence FEATURE: OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
ďn	Initial Score = 238 Optimized Score = 238 Significance = 2.24 Residue Identity = 100% Matches = 238 Mismatches = 0 Gaps - 0 Conservative Substitutions = 0
Scores: Mean Median Standard Deviation 46 7 85.78	X 10 20 30 40 50 60 70 METDTILLWYLLLWYPGSTGDIVLTQSPGTLSLSPGERATLSCKASQSYDYDGDSYMNWYQQKPGQAPRLLI
Times: CPU Total Elapsed 00:00:00:00.00 00:00:00	
Number of residues: 9504 Number of sequences searched: 87 Number of scores above cutoff: 87	80 140 YAASNLESGIPDRESGSGSGTDFTLTIHPVEEEDAATYYCQQSNEDPRTFGGGTRLEIKRTVAAPSVFIFPP
The scores below are sorted by initial score. Significance is calculated based on initial score.	80 90 100 110 120 130 140 140 150 160 170 180 190 200 210
2 100% identical sequences to the query sequence were found:	SDEQIASGTASVCLLINFYPREAKYQWKVDAALQSGNQESYTEQDSROSTYSLSSTLTLISKADYEKHKVY [1]
Init. Opt. Sequence Name Description Length Score Score Sig. Frame	150 160 170 180 190 200 210

```
Gaps
   Designed light
  Optimized Score = 238 Significance = Matches = 238 Mismatches = Conservative Substitutions =
   OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION: chain of humanized anti-Fas antibody
   US-09-499-662-52 (1-238)
US-09-053-583-52 Sequence 52, Application US/09053583A
  APPLICANT: Serizawa, Nobufusa
APPLICANT: Serizawa, Kimihisa
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Shiraishi, Akio
APPLICANT: NUMBER: US/09/053,583A
CURRENT FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: JP HEI 9-169088
EARLIER APPLICATION NUMBER: JP HEI 9-169088
EARLIER FILING DATE: 1997-06-25
  Sequence 52, Application US/09053583A GENERAL INFORMATION:
   TYPE: PRT
ORGANISM: Artificial Sequence
220 230 X
ACEVTHQGLSSPVTKSFNRGEC
  238
100%
  0
   Initial Score Residue Identity Gaps
```

```
METDTILLMVLLLMVPGSTGDIVLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMNWYQQKPGQAPRLLI
     200
  190
  180
  ACEVTHQGLSSPVTKSFNRGEC
220 X
   220 230 X
ACEVTHQGLSSPVTKSFNRGEC
  160
  160
```

3. US-09-499-662-52 (1-238) US-09-408-646-10 Sequence 109, Application US/09408646A

```
2.24
  OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
  9 1
  238 Significance
236 Mismatches
   4. US-09-499-662-52 (1-238)
US-09-053-583-10 Sequence 109, Application US/09053583A
  Optimized Score = 238
Matches = 236
Conservative Substitutions
   120
   Sequence 109, Application US/09053583A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: ICHKAWA, Kimihisa
APPLICANT: Ohsumi, Jun
APPLICANT: Ohsuki, Masahiko
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Hiroko
APPLICANT: Shiraishi, Akio
APPLICANT: Womehara, Shin
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 1980126/HG
CURRENT FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: JP HEI 9-169088
EARLIER APPLICATION NUMBER: JP HEI 9-169088
Sequence 109, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Harayama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVEWTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 109
LENGTH: 238
   110
   100
  TYPE: PRT
ORGANISM: Artificial Sequence
   ACEVTHQGLSSPVTKSFNRGEC
ACEVTHQGLSSPVTKSFNRGEC
ACEVTHQGLSSPVTKSFNRGEC
220
  238
998
   90
  Initial Score = Residue Identity = Gaps
   FEATURE
```

9

20

30

20

chain of humanized anti-Fas antibody

```
OTHER INFORMATION:
  160
  Initial Score = Residue Identity = Gaps .
   Initial Score
Residue Identity
  SEQ ID NO 54
LENGTH: 23
  TYPE: PRT
   Gaps
   YAASNLESGIPDRFSGSGSGTDFTLTIHPVEEEDAATYYCQQSNEDPRTFGQGTRLEIKRTVAAPSVFIFPP
   SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY
  ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Designed light
  Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody
  Optimized Score = 238 Significance = Matches = 236 Mismatches = Conservative Substitutions =
  130
   US-09-499-662-52 (1-238)
US-09-053-583-54 Sequence 54, Application US/09053583A
  120
   Sequence 54, Application US/09053583A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Ichikawa, Kimihisa
APPLICANT: Ichikawa, Kimihisa
APPLICANT: Ohsumi, Jun
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Hiroko
APPLICANT: Yonehara, Shin
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: US/09/053,583A
CURRENT FILING DATE: 1997-06-15
EARLIER APPLICATION NUMBER: JP HEI 9-169088
EARLIER APPLICATION NUMBER: JP HEI 9-16004
NUMBER OF SEQ ID NOS: 123
      HEI 9-276064
   110
EARLIER APPLICATION NUMBER: JP F
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 109
LENGTH: 238
   100
   ORGANISM: Artificial Sequence
  ACEVTHQELSSPVTKSFNRGEC
  238
998
0
  OTHER INFORMATION:
OTHER INFORMATION:
  Initial Score Residue Identity Gaps
  PRT
  FEATURE:
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X 10 30 WYGERGAPELLI WITTIMM POSTGEN TEACH AS OS SON Y DESCRIPTION OF THE WATTIMM POSTGEN TEACH AS OS SON Y DESCRIPTION OF THE WATTIMM POSTGEN TEACH AS OS SON Y DESCRIPTION OF THE WATTIMM POSTGEN THE WATTIMM POSTGEN THE WATTIMM POSTGEN AS OS SON Y DESCRIPTION OF THE WATTIMM POSTGEN AS OS SON Y DESCRIPTION 
   YAASNLESGIPDRFSGSGSGTDFTLTIHPVEEEDAATYYCQQSNEDPRTFGQGTRLEIKRTVAAPSVFIFPP
  SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHVY
150 160 170 180 180 210 210
  SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY
2.24
   140
  Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody
   210
238 Significance
236 Mismatches
  Optimized Score = 238 Significance
Matches = 236 Mismatches
Conservative Substitutions
   130
   200
  US-09-499-662-52 (1-238)
US-09-408-646-54 Sequence 54, Application US/09408646A
Optimized Score = 238
Matches = 236
Conservative Substitutions
   120
   190
  APPLICANT: Serizawa, Nobufusa APPLICANT: Haruyama, Hideyuki APPLICANT: Haruyama, Hideyuki APPLICANT: Haruyama, Kaori APPLICANT: Tamaki, Ikuko APPLICANT: Tamaki, Ikuko APPLICANT: Takahashi, Tohru TITLE OF INVENTION: Anti-Fas Antibodies FILE REFERENCE: 990540/HG CURRENT APPLICATION NUMBER: US/09/408,646A CURRENT FILING DATE: 1999-09-30 EARLIER APPLICATION NUMBER: JP 10-276881 EARLIER FILLNG DATE: 1998-09-30 NUMBER OF SEQ ID NOS: 165
  110
   110
   180
   Sequence 54, Application US/09408646A GENERAL INFORMATION:
  100
   ORGANISM: Artificial Sequence
   100
   170
  238
998
0
        238
998
0
   90
  OTHER INFORMATION:
OTHER INFORMATION:
```

234 Significance 231 Mismatches

9

20

```
OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
   US-09-499-662-52 (1-238)
US-09-053-583-10 Sequence 107, Application US/09053583A
   Optimized Score = 234
Matches = 231
Conservative Substitutions
  190
  APPLICANT: Serizawa, Nobufusa
APPLICANT: Intikawa, Kimihisa
APPLICANT: Intikawa, Kimihisa
APPLICANT: Ohtsuki, Jun
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Shiraishi Akio
APPLICANT: Shiraishi Akio
APPLICANT: Shiraishi Akio
APPLICANT: Shiraishi Akio
APPLICANT: Womehara, Shin
TILE OF INVENTION: Anti-ras Antibodies
FILE REFERENCE: 980126/HG
CURRENT FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: US/09/053,583A
CURRENT FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
EARLIER FILING DATE: 1997-10-08
EARLIER FILING DATE: 1997-10-08
EARLIER FILING DATE: 1997-10-08
                APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/46
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1998-09-30
EARLIER PILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 50
  180
   Sequence 107, Application US/09053583A
  ORGANISM: Artificial Sequence
  170
  SOFTWARE: Patentin Ver. 2.0
  234
978
0
   20
  160
  SENERAL INFORMATION:
   Initial Score = Residue Identity = Gaps
   TYPE: PRT
  FEATURE:
  150
   6
  SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY
   X 10 20 30 40 50 60 70 METDTILLWVLLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMNWYQQKPGQAPRLLI
   SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY
  OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
   Optimized Score - 234 Significance
Matches - 230 Mismatches
Conservative Substitutions
  200
   7. US-09-499-662-52 (1-238)
US-09-408-646-10 Sequence 107, Application US/09408646A
  US-09-499-662-52 (1-238)
US-09-408-646-50 Sequence 50, Application US/09408646A
  190
  APPLICANT: Tanaki, Ikuko
APPLICANT: Tanaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
  180
  Sequence 107, Application US/09408646A
GENERAL INFORMATION:
   Sequence 50, Application US/09408646A GENERAL INFORMATION:
  ORGANISM: Artificial Sequence
   APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Nakahara, Kaori
  APPLICANT: Serizawa, Nobufusa
APribiCANT; Haruyama, Hideyuki
  170
   ACEVTHQGLSSPVTKSFNRGEC
   ACEVTHQGLSSPVTKSFNRGEC
220 X
   234
96%
0
   Initial Score Residue Identity Residue
```

ъ В

```
220
   METDTILLWVLLLWVPGSTGEIVLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMNWYQQKPGQAPRLLI

X 10 20 30 40 70
   80 90 100 110 120 130 140
YAASNLESSIIPDRPSGSGGGTDFTLTIHPVEEEDAATYYCQQSNEDPRTFGGGTRLEIKRTVAAAPSVFIFPP
  X 10 20 30 40 50 60 70 METDTILLWVLLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCKASQSVDXDGDSYMNWYQQKPGQAPRILLI
  2.19
   2.19
6
2
   OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
  OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
   Significance
Mismatches
  Significance
Mismatches
   10. US-09-499-662-52 (1-238)
US-09-053-583-50 Sequence 50, Application US/09053583A
   234
   Conservative Substitutions
  234 231
   GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa
APPLICANT: Carizawa, Nobufusa
APPLICANT: Chisumi, Jun
APPLICANT: Obsumi, Jun
APPLICANT: Harlawa, Kimihisa
APPLICANT: Harlawa, Hideyuki
APPLICANT: Harlashi, Tohru
APPLICANT: Shiraishi, Tohru
APPLICANT: Shiraishi, Akio
APPLICANT: Shiraishi, Akio
APPLICANT: Shiraishi, Shin
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT FILING DATE: 1998-04-01
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTWARE: PATENTING NAME: 2.0
SEQ ID NO 50
LENGTH: 238
   9 1
  II ti
  Optimized Score
Matches
   Optimized Score
Matches
  Sequence 50, Application US/09053583A
   100
  ORGANISM: Artificial Sequence
  ORGANISM: Artificial Sequence
  234
968
0
  234
978
   90
  Initial Score -
Residue Identity =
   6 11 4
   Initial score
Residue Identity
SEQ ID NO 107
LENGTH: 238
                                    TYPE: PRT
  FEATURE:
```

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| Caps | Conservative Substitutions | Caps |
```

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Sednences

FastDB - Fast Pairwise Comparison of

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us-09-499-662-54.res

Results file Release 5.4

```
YAASNLESGIPDRFSGSGSGTDFTLTIHPVEEEDAATYYCQOSNEDPRTFGQGTRLEIKRTVAAPSVFIFPP
   2.24
   Sig.
   Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody
   0 4
   Init. Opt.
Length Score Score
  237
237
237
234
234
234
234
   Significance
Mismatches
  130
   US-09-499-662-54 (1-238)
US-09-408-646-54 Sequence 54, Application US/09408646A
   Optimized Score = 238
Matches = 238
Conservative Substitutions
   120
  US-09-408-646-10 Sequence 109, Application US-09-408-646-52 Sequence 52, Application US-09-053-583-10 Sequence 109, Application US-09-053-583-52 Sequence 52, Application US-09-063-646-50 Sequence 107, Application US-09-053-583-10 Sequence 50, Application US-09-053-583-50 Sequence 50, Application US-09-053-583-50 Sequence 50, Application
  **** 2 standard deviations
  APPLICANT: Serizawa, Nobufusa APPLICANT: Serizawa, Nobufusa APPLICANT: Haruyama, Hideyuki APPLICANT: Haruyama, Hideyuki APPLICANT: Tawakhara, Kaori APPLICANT: Tawakhari, Ikuko APPLICANT: Takahashi, Tohru TITLE NE FERENCE: 990540/46 CURRENT APPLICATION NUMBER: US/09/408,646A CURRENT FILING DATE: 1999-09-30 EARLIER FILING DATE: 1999-09-30 NUMBER OF SEQ ID NOS: 165 SEQ ID NOS: 165 LENGTH: 238
  Application
Application
   110
   Sequence 54, Application US/09408646A GENERAL INFORMATION:
Sequence 54,
Sequence 54,
   is:
   100
   TYPE: PRT
ORGANISM: Artificial Sequence
   The list of other best scores
   Description
   220 230 X
ACEVTHQGLSSPVTKSFNRGEC
  238
100%
0
 1. US-09-408-646-54
2. US-09-053-583-54
   90
   OTHER INFORMATION:
OTHER INFORMATION:
   . . .
  Initial Score
Residue Identity
Gaps
   Name
   80
   Sequence
  Mon 22 Apr 102 16:30:41-PDT.
   Sig. Frame
   Results of the initial comparison of US-09-499-662-54 (1-238) with: File: yu662.pep
  238
  Opt.
Score
  ~
   32
   Standard Deviation 85.65
  212
  Init.
Length Score
   Total Elapsed 00:00:00:00
   2 100% identical sequences to the query sequence were found:
  185
2
   (1-238)
87
87
   o
   Joining penalty Window size
  " are sorted by initial score. calculated based on initial score.
  159
   sdavid
  Query sequence being compared:US-09-499-662-54
Number of sequences searched:
Number of scores above cutoff:
```

132

106

<del>-</del> 62

53

56

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SHOPHZOHS

SCORE STDEV

10-

O E

50-

Z D Z G W K

100

K-tuple

PAM-150 . 16%

sim.

Similarity matrix Threshold level of Mismatch penalty

1.00 0.05 0

Gap penalty Gap size penalty Cutoff score Randomization group

PARAMETERS

STATISTICS

SEARCH

Median 7

Mean 46

Scores

Times:

9504 87 87

sequences searched: scores above cutoff:

The scores below Significance is

residues:

Number

of of

Number Number

Description

Sequence Name

00:00:01

```
Optimized Score = 237 Significance = 2.23
Matches = 234 Mismatches = 1
Conservative Substitutions = 3
   OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
   Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody
  4. US-09-499-662-54 (1-238)
US-09-408-646-52 Sequence 52, Application US/09408646A
   20
   Optimized Score = 237
Matches = 236
Conservative Substitutions
  120
   Sequence 52, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Barizawa, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Tawahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1998-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER PFLING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 52
LENGTH: 238
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 109
   40
   180
   30
  100
   ORGANISM: Artificial Sequence
   ORGANISM: Artificial Sequence
   170
  237
98%
0
   237
998
0
   20
   OTHER INFORMATION:
OTHER INFORMATION:
  Initial Score Residue Identity =
   Initial Score = Residue Identity = Gaps
   10
  TYPE: PRT
  FEATURE:
  LENGIH:
   X 10 20 30 40 70 70 METIT ILLWVLLIWVPGSTGDIVLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMWYQQKPGQPPKLLI
  2.24
   OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
   .
   Significance
Mismatches

    US-09-499-662-54 (1-238)
    US-09-408-646-10 Sequence 109, Application US/09408646A

    US-09-499-662-54 (1-238)
    US-09-053-583-54 Sequence 54, Application US/09053583A

   Optimized Score = 238
Matches = 238
Conservative Substitutions
  APPLICANT: Serizawa, Nobufusa
APPLICANT: Ofikawa, Kimihisa
APPLICANT: Ofikawa, Kimihisa
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Torkahashi, Torku
APPLICANT: Shiraishi, Akio
APPLICANT: Ohnera, Shin
TILE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: JP HEI 9-169088
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTWARE: PATENTIN VEI: 2.0
SEQ ID NO 54
LENGTH: 238
   180
   Sequence 109, Application US/09408646A GENERAL INFORMATION:
  Sequence 54, Application US/09053583A
GENERAL INFORMATION:
   ORGANISM: Artificial Sequence
  APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Nakahara, Kaori
APPLICANT: Tamaki, Ikuko
  ACEVTHOGLSSPVTKSFNRGEC 220 x
   238
100%
0
   ACEVTHOGLSSPVTKSFNRGEC
  Initial Score Residue Identity Gaps
  230
```

2.23

Significance Mismatches

/ MASNLESGIPDRFSGSGSGTDFTLTIHPVEEEDAATYYCQQSNEDPRTFGQGTKLEIKRTVAAPSVFIFPP

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```
80 90 100 110 120 130 140 XAASNLESGIPDRFSGSGSGTDFTLTIHPVEEEDAATYYCQQSNEDPRTFGQGTRLEIKRTVAAPSVFIFPP
  x 10 20 30 40 50 60 70 METDTILLWVLLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMNWYQQKPGQPPKLLI
   2.23
   Designed light
  Significance
Mismatches
  130
   200
   Description of Artificial Sequence: I chain of humanized anti-Fas antibody
   5. US-09-499-662-54 (1-238)
US-09-053-583-10 Sequence 109, Application US/09053583A
   Optimized Score = 237
Matches = 234
Conservative Substitutions
   190
  CENERAL INFORMATION:

APPLICANT: SCRIZAWA, NObufusa
APPLICANT: Chikawa, Kimihisa
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Min
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT APPLICATION NUMBER: JP HEI 9-82953
EARLIER APPLICATION NUMBER: JP HEI 9-16908
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25
   Optimized Score
Matches
   110
   Sequence 109, Application US/09053583A
   100
  ORGANISM: Artificial Sequence
   170
   220 230 X
ACEVTHQGLSSPVTKSFNRGEC
   ACEVTHQGLSSPVTKSFNRGEC 220 X
  237
98%
0
   OTHER INFORMATION:
   OTHER INFORMATION:
  GENERAL INFORMATION:
   160
  Initial Score
Residue Identity
Gaps
```

```
X 10 20 3U 4U ALLIMVEGYGENTUTQSPGTASLSSGSASQSVDYDGDSYMNWYQQKPGQPPKILI
  2.23
  140
   Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody
   Significance
Mismatches
  130
   200
  US-09-499-662-54 (1-238)
US-09-053-583-52 Sequence 52, Application US/09053583A
   50
   Optimized Score = 237
Matches = 236
Conservative Substitutions
  120
   190
   APPLICANT: Serizawa, Nobufusa
APPLICANT: Serizawa, Kimihisa
APPLICANT: Ohtsunt, Jun
APPLICANT: Ohtsunt, Jun
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Akio
APPLICANT: Yoshida, Akio
APPLICANT: Yonehara, Shin
TILE OF INVERTION: Anti-Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT APPLICATION NUMBER: JP HEI 9-82953
EARLIER APPLICATION NUMBER: JP HEI 9-169088
EARLIER APPLICATION NUMBER: JP HEI 9-169088
EARLIER APPLICATION NUMBER: JP HEI 9-169088
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTHARE: Patentin Ver. 2.0
  110
  180
  Sequence 52, Application US/09053583A
  100
   ORGANISM: Artificial Sequence
   170
   ACEVTHOGLSSPVTKSFNRGEC
220 X
   220 230 X
ACEVTHQGLSSPVTKSFNRGEC
   237
998
0
  90
   OTHER INFORMATION:
OTHER INFORMATION:
  GENERAL INFORMATION:
   160
   1 1 1
   Initial Score
Residue Identity
  LENGTH: 238
TYPE: PRT
  .
```

230

220

140

130

120

110

100

2.20

1 0

```
yaasnlesgipdrfsgsgsgtdftltihpveeedaatycqqsnedprffggtrleikrtvaapsvfifpp
  150 160 170 180 190 200 210 SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY
  OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
   OTHER INFORMATION: Description of Artificial Sequence: Designed light
   Optimized Score = 234 Significance
Matches = 229 Mismatches
Conservative Substitutions
   US-09-499-662-54 (1-238)
US-09-053-583-10 Sequence 107, Application US/09053583A
  120
   APPLICANT: Consumi, Jun
APPLICANT: Consumi, Jun
APPLICANT: Harlwan, Hadeyuki
APPLICANT: Harlwana, Hadeyuki
APPLICANT: Harlwana, Hadeyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Shiralshi, Akio
APPLICANT: Ballashi, Bhir
FILE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: UP HEI 9-169088
EARLIER APPLICATION NUMBER: UP HEI 9-169088
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTWARE: PATENTING DATE: 1997-10-08
LENGTH: 238
  110
                        10-276881
  Sequence 107, Application US/09053583A GENERAL INFORMATION:
  CURRENT FILING DATE: 1999-09-30 EARLIER APPLICATION NUMBER: JP 1 EARLIER FILING DATE: 1998-09-30 NUMBER OF SEQ ID NOS: 165 SEQ ID NO 50 LENGTH: 238
  100
   ORGANISM: Artificial Sequence
   TYPE: PRT ORGANISM: Artificial Sequence
  APPLICANT: Serizawa, Nobufusa
  APPLICANT: Ichikawa, Kimihisa
  220 230 X
ACEVTHOGLSSPVTKSFNRGEC
   ACEVTHQGLSSPVTKSFNRGEC
   234
968
  90
  8 0 0
   Initial Score
Residue Identity
   FEATURE
   YAASNLESGIPDRFSGSGSGTDFTLTIHPVEEEDAATYYCQQSNEDPRTFGQGTRLEIKRTVAAPSVFIFPP
  2.20
  OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
  ij ij
  Significance
Mismatches
   US-09-499-662-54 (1-238)
US-09-408-646-10 Sequence 107, Application US/09408646A
   8. US-09-499-662-54 (1-238)
US-09-408-646-50 Sequence 50, Application US/09408646A
  Conservative Substitutions
  Sequence 107, Application US/09408646A
GENERAL INPORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tarathyama, Tauko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09.30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
   Sequence 50, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Harupama, Hideyuki
APPLICANT: Harupama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
ELLE REFERENCE: 990540/MG
CURRENT'APPLICATION NUMBER: US/09/408,646A
  ı
  Optimized Score
Matches
  100
  ORGANISM: Artificial Sequence
                      ACEVTHQGLSSPVTKSFNRGEC
220 230 X
  ACEVTHQGLSSPVTKSFNRGEC
220 X
ACEVTHOGLSSPVTKSFNRGEC
  ACEVTHQGLSSPVTKSFNRGEC
  234
95%
   0
  90
```

Initial Score Residue Identity Gaps

SEQ ID NO 107

230

2.20 2.20 Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody Optimized Score = 234 Significance = Autches = 228 Mismatches = Conservative Substitutions = Significance = Mismatches = 10. US-09-499-662-54 (1-238) US-09-053-583-50 Sequence 50, Application US/09053583A chain of humanized anti-Fas antibody Optimized Score = 234
Matches = 229
Conservative Substitutions 190 APPLICANT: Serizawa, Nobufusa
APPLICANT: Serizawa, Nobufusa
APPLICANT: Ichikawa, Kimihisa
APPLICANT: Ohtsuki, Masahko
APPLICANT: Ohtsuki, Masahko
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Shiraishi, Akio
APPLICANT: Shiraishi, Akio
APPLICANT: Shiraishi, Akio
APPLICANT: Yonehara, Shin
TILE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT FILING DATE: 1998-04-01
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEO ID NOS: 123
SOFTWARE: PALENTIN VET. 2.0 Optimized Score Matches Optimized Score Matches 180 Sequence 50, Application US/09053583A GENERAL INFORMATION: ORGANISM: Artificial Sequence 170 220 230 X ACEVTHQGLSSPVTKSFNRGEC ACEVTHQGLSSPVTKSFNRGEC 220 x 234 96**%** 0 234 958 0 OTHER INFORMATION: OTHER INFORMATION: OTHER INFORMATION: 160 Initial Score = Residue Identity = Gaps = = 1 1 1 Initial Score Residue Identity Gaps SEQ ID NO 50 LENGTH: 238

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- Fast Pairwise Comparison of Sequences

Release 5.4

FastDB

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Results file us-09-499-662-109.res made

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Sig. Frame
  ig. Frame
  X 10 20 30 40 50 60 70 METDIILIMVLLIMVPGSTGEIVLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMMYQQKPGQAPRLLI
   2.24
  2.24
2.24
  2.23
2.23
2.20
2.20
2.19
2.19
 24
   OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
  Si
  Init. Opt.
Length Score Score
   Opt.
Score
 238
  237
2337
235
235
234
234
  Optimized Score - 238 Significance
Matches - 238 Mismatches
Conservative Substitutions
   mean ***
   Init.
Length Score
   1. US-09-499-662-109 (1-238)
US-09-408-646-10 Sequence 109, Application US/09408646A
   found
   **** 2 standard deviations above
   120
  query sequence were
   US-09-408-646-54 Sequence 54, Application US-09-053-583-54 Sequence 54, Application US-09-053-583-10 Sequence 107, Application US-09-053-583-10 Sequence 107, Application US-09-446-50 Sequence 50, Application US-09-053-583-50 Sequence 50, Application
1. US-09-408-646-10 Sequence 109, Application 2. US-09-053-583-10 Sequence 109, Application
  3. US-09-408-646-52 Sequence 52, Application 4. US-09-053-583-52 Sequence 52, Application
   Sequence 109, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Berizawa, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 109
LENGTH: 238
   110
   The list of other best scores is:
   100
   ORGANISM: Artificial Sequence
   100% similar sequences to the
  Description
  Description
  238
100%
0
   90
  Initial Score
Residue Identity
   Sequence Name
  Sequence Name
  on Mon 22 Apr 102 16:32:22-PDT.
  Results of the initial comparison of US-09-499-662-109 (1-238) with: File : yu662.pep
   *
   238
  Init. Opt.
Length Score Score
  32
   Standard Deviation 85.77
  Total Elapsed 00:00:00.00
   2 100% identical sequences to the query sequence were found:
   185
2
  Query sequence being compared:US-09-499-662-109 (1-238)
Number of sequences searched:
Number of scores above cutoff:
87
  Joining penalty Window size
   The scores below are sorted by initial score. Significance is calculated based on initial score.
   159
  sdavid
```

132

106

<del>-</del>2

23

-56

==0

SCORE STDEV

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ODEZOES

K-tuple

PAM-150 168

sim.

Similarity matrix Threshold level of s Mismatch penalty Gap penalty

Gap Size penalty Cutoff score Randomization group

1.00 0.05

PARAMETERS

STATISTICS

SEARCH

Median 7

Mean 46

Scores:

Times:

9504 87 87

sequences searched: scores above cutoff:

residues:

of of

Number Number

Number

Description

Sequence Name

00:00:00

```
ACEVTHQGLSSPVTKSFNRGEC
220 x
220 230 ACEVTHQGLSSPVTKSFNRGEC
```

2. US-09-499-662-109 (1-238) US-09-053-583-10 Sequence 109, Application US/09053583A

APPLICANT: Serizawa, Nobufusa
APPLICANT: Serizawa, Kimihisa
APPLICANT: Ichikawa, Kimihisa
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Shiraishi, Akio
APPLICANT: Shiraishi, Akio
APPLICANT: Womehara, Shin
TILE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: JP HEI 9-16908
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEO ID NOS: 123
SOFTWARE: PACHALIN VET: 2.0 Sequence 109, Application US/09053583A GENERAL INFORMATION:

SEC ID NO 109

ORGANISM: Artificial Sequence

Designed light OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION: chain of humanized anti-Fas antibody

Significance Mismatches Optimized Score = 238
Matches = 238
Conservative Substitutions Optimized Score Matches 238 100% 0 Initial Score Residue Identity

190 180 170

ACEVTHQGLSSPVTKSFNRGEC 220 x 220 230 X ACEVTHQGLSSPVTKSFNRGEC

US-09-499-662-109 (1-238) US-09-408-646-52 Sequence 52, Application US/09408646A . ش

SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody ı 238 Significance 236 Mismatches 9 20 Optimized Score = 238
Matches = 236
Conservative Substitutions 120 APPLICANT: Serizawa, Nobufusa APPLICANT: Haruyama, Hideyuki APPLICANT: Haruyama, Hideyuki APPLICANT: Haruyama, Hideyuki APPLICANT: Tawahara, Kaori APPLICANT: Takahashi, Tohru TITLE OF INVENTION: ANLI-Fas Antibodies FIER REFERENCE: 990540/46
CURRENT APPLICATION NUMBER: US/09/408,646A CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
SEQ ID NO 52
LENGTH: 238 110 Sequence 52, Application US/09408646A GENERAL INFORMATION: 100 ORGANISM: Artificial Sequence 238 998 ACEVTHQGLSSPVTKSFNRGEC ACEVTHOGLSSPVTKSFNRGEC 220 X 0 90 Initial Score = Residue Identity = TYPE: PRT FEATURE:

2.24

US-09-499-662-109 (1-238) US-09-053-583-52 Sequence 52, Application US/09053583A APPLICANT: Obsumi, Jun
APPLICANT: Obsumi, Jun
APPLICANT: Obsumi, Jun
APPLICANT: Harvyama, Hideyuki
APPLICANT: Harvyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Stafaishi, Akio
APPLICANT: Shiraishi, Akio
APPLICANT: Shiraishi, Akio
APPLICANT: Shiraishi, Abio
APPLICANT: Shorishi, Abio
APPLICANT: Horehara, Shin
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 980126/4/G
CURRENT FILING DATE: 1998-04-01
EARLIER APPLICATION NUMBER: UP HEI 9-82953
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25 Sequence 52, Application US/09053583A GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa APPLICANT: Ichikawa, Kimihisa

SEQ ID NO 52 LENGTH: 238

TYPE: PRT

10

```
METDT1LLWVLLLWVPGSTGD1VLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMNWYQQKPGQPPKLL1
   Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody
   Optimized Score = 237 Significance
Matches = 234 Mismatches
Conservative Substitutions
  US-09-499-662-109 (1-238)
US-09-053-583-54 Sequence 54, Application US/09053583A
   190
  190
  APPLICANT: SETIZAWA, NObufusa
APPLICANT: ICHIKAWA, Kimihisa
APPLICANT: Obsumi, Jun
APPLICANT: Obsumi, Jun
APPLICANT: Obsumi, Jun
APPLICANT: Obsumi, Jun
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Akio
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Akio
APPLICANT: Yoshida, Akio
APPLICANT: Yoshida, Juloko
APPLICANT: Yoshida, Juloko
APPLICANT: Yoshida, Juloko
APPLICANT: Yoshida, Juloko
APPLICANT: Yoshida, Julo
APPLICANT: Nowiber: 1990-04-01
EARLIER APPLICATION NOWBER: JP HEI 9-16908
EARLIER FILING DATE: 1997-04-01
EARLIER APPLICATION NUMBER: JP HEI 9-16908
EARLIER APPLICATION NUMBER: JP HEI 9-16908
EARLIER APPLICATION NUMBER: JP HEI 9-16908
EARLIER FILING DATE: 1997-06-25
EARLIER APPLICATION NUMBER: JP HEI 9-16908
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTWARE: PALENTIN Ver: 2.0
  110
  180
   180
   Sequence 54, Application US/09053583A GENERAL INFORMATION:
  100
   ORGANISM: Artificial Sequence
  170
  170
  237
98%
0
  90
   OTHER INFORMATION:
OTHER INFORMATION:
  160
  160
  Initial Score = Residue Identity = Gaps = =
  SEQ ID NO 54
LENGTH: 238
  PRT
  150
  150
   .
   METDTILLWVLLLWVPGSTGEIVLTOSPGTLSLSPGERATLSCKASQSVDYDGDSYMNWYQQKPGOAPRLLT
  METDTILLMVLLLMVPGSTGEIVLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMNWYQQKPGQAPRLLI
   20
  2.23
   Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody
   OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
  Optimized Score = 238 Significance = Matches = 236 Mismatches = Conservative Substitutions =
  237 Significance
234 Mismatches
   9
   9
   5. US-09-499-662-109 (1-238)
US-09-408-646-54 Sequence 54, Application US/09408646A
   20
   20
   Conservative Substitutions
  190
   Sequence 54, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Serizawa, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TILE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
  Optimized Score =
  11 11
EARLIER APPLICATION NUMBER: JP HEI 9-276064
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTWARE: PATENTIA VET. 2.0
   40
   40
  Optimized Score
Matches
   30
  ORGANISM: Artificial Sequence
  ORGANISM: Artificial Sequence
  220 230 X
ACEVTHQGLSSPVTKSFNRGEC
  237
98%
0
   ACEVTHQGLSSPVTKSFNRGEC
220 230 X
  238
998
0
   20
   20
  FEATURE:
OTHER INFORMATION:
OTHER INFORMATION:
  160
  Initial Score = Residue Identity = Gaps
  Residue Identity = Gans
```

2.23 1 3

SEQ ID NO 54 LENGTH: 238

FEATURE

140

130

120

210

```
ORGANISM: Artificial Sequence
  220 230 X
ACEVTHQGLSSPVTKSFNRGEC
   ACEVTHQGLSSPVTKSFNRGEC
220 230 X
   235
  Initial Score = Residue Identity =
  FEATURE
 X 10 20 30 AVENTELECKASOSVOYDEDSYMMYQOKPGQAPRILITIES METDITLEMVLLIMVPGSTGETVLTQSPGTLSLSPGERECKASOSVOYDFDGDSYMMYQOKPGQAPRILITIES
  80 90 100 110 120 130 140 YAASNLESGIPDRFSGSGSGTDFTLTIHPVEEEDAATYYCQQSNEDPRTFGQGTKLEIKRTVAAAPSVFIFPP
   Designed light
  210
   Optimized Score - 235 Significance
Matches - 232 Mismatches
Conservative Substitutions
  200
   US-09-499-662-109 (1-238)
US-09-408-646-10 Sequence 107, Application US/09408646A
   OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION: chain of humanized anti-Fas antibody
   US-09-499-662-109 (1-238)
US-09-053-583-10 Sequence 107, Application US/09053583A
  190
  APPLICANT: Serizawa, Nobufusa APPLICANT: Haruyama, Hideyuki APPLICANT: Nakahara, Kaori APPLICANT: Tamaki, Ikwori APPLICANT: Tamaki, Ikwori APPLICANT: Takahashi, Tohru TITLE OF INVENTION: Anti-Fas Antibodies FILE REFERENCE: 990540/HG CURRENT APPLICATION NUMBER: US/09/408,646A CURRENT FILING DATE: 1999-09-30 EARLIER APPLICATION NUMBER: UP 10-276881 EARLIER FILING DATE: 1998-09-30 NUMBER OF SEQ ID NOS: 165
  180
  Sequence 107, Application US/09408646A
GENERAL INFORMATION:
   Sequence 107, Application US/09053583A GENERAL INFORMATION:
   ORGANISM: Artificial Sequence
  170
  ACEVTHQGLSSPVTKSFNRGEC
220 X
   220 230 X
ACEVTHQGLSSPVTKSFNRGEC
   ACEVTHOGLSSPVTKSFNRGEC
   ACEVTHQGLSSPVTKSFNRGEC
220 230 X
  235
978
0
  160
  Initial Score Residue Identity - Gaps
```

TYPE: PRT

```
80 90 100 110 120 130 140 YAASNLESGIPDRFSGSGSGTDFTLTIHPVEEEDAATYYCQQSNEDPRTFGQGTKLEIKRTVAAAPSVFIFPP
  2.20
  Designed light
  235 Significance
232 Mismatches
OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION; chain of humanized anti-Fas antibody
   9. US-09-499-662-109 (1-238)
US-09-408-646-50 Sequence 50, Application US/09408646A
  Optimized Score = 235
Matches = 232
Conservative Substitutions
   Sequence 50, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Nakahara, Kaori
APPLICANT: Nakahara, Kaori
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohtu
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
```

APPLICANT: Serizawa, Nobufusa APPLICANT: Ichikawa, Kimihisa

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```
x 10 20 30 40 50 60 70 METDTILLWVLLLWVPGSTGEIVLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMNWYQQKPGQAPRLLI
  METDTILLMVLLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCKASQSVDYDGDSYMNWYQQKPGQAPRLII

X 10 50 60 70
   150 160 170 180 200 210 SDEQLKSGTASYVCLLNNFYPREAKVQNKVDNALQSGNSQESVJEQDSKDSTYSLSSTLTLSKADYEKHKVY
  OTHER INFORMATION: Description of Artificial Sequence: Designed light OTHER INFORMATION: chain of humanized anti-Fas antibody
  Description of Artificial Sequence: Designed light chain of humanized anti-Fas antibody
  Significance
Mismatches
  Significance
Mismatches
   130
  US-09-499-662-109 (1-238)
US-09-053-583-50 Sequence 50, Application US/09053583A
  Optimized Score = 234
Matches = 229
Conservative Substitutions
  234
   120
  APPLICANT: Serizawa, Nobufusa
APPLICANT: Chikawa, Kimihisa
APPLICANT: Ohsumi, Jun
APPLICANT: Takahashi, Tohru
APPLICANT: Takahashi, Tohru
APPLICANT: Shiraishi, Akio
APPLICANT: Shiraishi, Akio
APPLICANT: Yonehara, Shin
TITLE OF INVENTION: Anti-ras Antibodies
FILE REFERENCE: 980126/46
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT FILING DATE: 1998-04-01
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-00-08
NUMBER: OF SEQ. DI NOS: 123
  N 18
  Optimized Score
Matches
   110
  Sequence 50, Application US/09053583A
  ORGANISM: Artificial Sequence
   100
   ORGANISM: Artificial Sequence
   PatentIn Ver. 2.0
   234
968
0
  234
968
  OTHER INFORMATION: OTHER INFORMATION:
  GENERAL INFORMATION:
  Initial Score = Residue Identity =
  Initial Score = Residue Identity =
   SOFTWARE: Pate
SEQ ID N.) 50
LENGTH: 238
Q ID NO 50
LENGTH: 238
                                       TYPE: PRT
   FEATURE:
  10.
```

nto.

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Frame

```
GPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSL
  0 0 0
   Score
Identity :
  370
  TYPE: PRT
  FEATURE:
  LENGTH
   Residue
   Initial
            KAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSK
   3.01
   heavy
   . . .
   Designed
   Significance
Mismatches
   OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION: chain of humanized anti-Fas antibody
  (1-470)
Sequence 89, Application US/09053583A
  410
   Optimized Score = 470
Matches = 470
Conservative Substitutions
   120
   APPLICANT: Serizawa, Nobufusa
APPLICANT: Serizawa, Kimihisa
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Ohtsuki, Masahiko
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Yoshida, Hiroko
APPLICANT: Yoshida, Hiroko
APPLICANT: Yonehara, Shin
TITLEOF: NIVERINION: ANTL: Fas Antibodies
FILE REFERENCE: 980126/HG
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT APPLICATION NUMBER: JP HEI 9-82953
EARLIER APPLICATION NUMBER: JP HEI 9-16908
EARLIER APPLICATION NUMBER: JP HEI 9-276064
NUMBER OF SEQ ID NOS: 123
SOFTWARE: PATENTIN Ver: 2.0
  400
   LTVDKSRWQQGNVFSCSVMHEALHNHTTQKSLSLSPGK
440 450 450 460 470
  440 450 450 A60 X
LTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK
   Sequence 89, Application US/09053583A GENERAL INFORMATION:
   460
   100
  ORGANISM: Artificial Sequence
   470
100%
0
   450
   90
  US-09-499-662-89
US-09-053-583-89
   0 0 0
   Initial Score
Residue Identity
Gaps
```

210

190

180

160

100 170

```
GPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSL
  3.00
  Description of Artificial Sequence: Designed heavy chain of humanized anti-Fas antibody
  Optimized Score = 469 Significance
Matches = 467 Mismatches
Conservative Substitutions

    US-09-499-662-89 (1-470)
    US-09-408-646-14 Sequence 143, Application US/09408646A

  190
  APPLICANT: Serizawa, Nobufusa APPLICANT: Serizawa, Nobufusa APPLICANT: Nakahara, Kaori APPLICANT: Nakahara, Kaori APPLICANT: Tamaki, Ikuko APPLICANT: Tamaki, Ikuko APPLICANT: Takahashi, Tohru TITLE OF INVENTION: Anti-Fas Antibodies FILE REFERENCE: 990540/HG CURRENT FILING DATE: 1999-09-30 EARLIER APPLICATION NUMBER: UP.0-276881 EARLIER PILING DATE: 1998-09-30 NUMBER OF SEQ ID NOS: 165
  400
   TTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK
   LTVDKSRWQQGNVFSCSVMHEALHNYTQKSLSLSPGK
440 450 450 450 470
   180
   Sequence 143, Application US/09408646A GENERAL INFORMATION:
  390
  100
   ORGANISM: Artificial Sequence
   170
   469
998
   380
  06
  OTHER INFORMATION:
   OTHER INFORMATION:
   160
```

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```
5.
  X 10 20 30 40 50 60 70 MGWSCIILFLVATATGVGVLVQSGAEVKKPGASVKVSCKASGYTFTSYWAQWVKQAPGQRLEWMGEIDP
  430
  3.00
2
0
   280
  OTHER INFORMATION: Description of Artificial Sequence: Designed OTHER INFORMATION: chain of humanized anti-Fas antibody
  Optimized Score = 469 Significance
Matches = 468 Mismatches
Conservative Substitutions
  270
  US-09-499-662-89 (1-470)
US-09-408-646-11 Sequence 117, Application US/09408646A
  260
   APPLICANT: Serizawa, Nobufusa APPLICANT: Haruyama, Hideyuki APPLICANT: Nakahara, Kaori APPLICANT: Nakahara, Kaori APPLICANT: Tamaki, Ikwori APPLICANT: Tamaki, Ikwo APPLICANT: Takahashi, Tohru TITLE OF INVENTION: Anti-Fas Antibodies FILE REFERENCE: 990540/HG CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: UP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
   Sequence 117, Application US/09408646A GENERAL INFORMATION:
  250
   ORGANISM: Artificial Sequence
240
  469
998
0
   380
  230
  Initial Score = Residue Identity = Gaps
  LENGTH: 470
   TYPE: PRT
220
```

```
3.00
  0 7
   heavy
  Significance
Mismatches
   Designed
  130
  US-09-499-662-89 (1-470)
US-09-053-583-11 Sequence 117, Application US/09053583A
   antibody
   Description of Artificial Sequence: chain of humanized anti-Fas antibody
  Optimized Score - 469
Matches - 468
Conservative Substitutions
  120
   APPLICANT: Serizawa, Nobufusa
APPLICANT: Ochiwawa, Kimihisa
APPLICANT: Ochiwawa, Kimihisa
APPLICANT: Ochiwami, Jun
APPLICANT: Ochiwami, Jun
APPLICANT: Haruyama, Hideyuki
APPLICANT: Takahashi, Tohru
APPLICANT: Shiraishi, Akio
APPLICANT: Sonida, Hiroko
APPLICANT: Sonida, Hiroko
APPLICANT: Sonehara, Shin
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 380126/HG
CURRENT APPLICATION NUMBER: US/09/053,583A
CURRENT APPLICATION NUMBER: JP HEI 9-82953
EARLIER FILING DATE: 1997-04-01
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-06-25
EARLIER FILING DATE: 1997-10-08
NUMBER OF SEQ ID NOS: 123
SOFTHARE: PatentIn Ver: 2.0
  330
  400
  110
   LTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK
   LTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK 440 450 470
   Application US/09053583A
  320
  390
  100
  TYPE: PRT
ORGANISM: Artificial Sequence
  469
998
0
  380
  90
   OTHER INFORMATION:
OTHER INFORMATION:
   Sequence 117, Applications
  11 11 11
  Initial Score
Residue Identity
Gaps
   LENGTH: 470
   290
```

SDSYINYNQKFKGKATLIVDISASIAYMELSSLKSEDIAVYYCARNRDYSNNWYFDVWGEGTLVIVSSASIK

Mon

```
468
998
0
  INFORMATION:
   INFORMATION:
                            160
  1 11 11
  Score
Identity
  TYPE: PRT
  LENGTH:
  OTHER
   OTHER
  Initial S
Residue 1
Gaps
                                     SDSYTNYNOKFKGKATLTVDTSTSTAYMELSSLRSEDTAVYYCARNRDYSNNWYFDVWGEGTLVTVSSASTK
   VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYRCKVSNKALPAPIEKTIS
  KAKGQPREPQYYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSK
  SDSYTNYNOKFKGKATLIVDTSASTAYMELSSLRSEDTAVYYCARNRDYSNNWYFDVWGEGTLVTVSSASTK
   2.99
3
   OTHER INFORMATION: Description of Artificial Sequence: Designed heavy OTHER INFORMATION: chain of humanized anti-Fas antibody
   0 N A
   350
  Significance
Mismatches
  130
  270
  US-09-499-662-89 (1-470)
US-09-408-646-14 Sequence 147, Application US/09408646A
   340
   410
  468
466
   Conservative Substitutions
   Sequence 147, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Berizawa, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TILE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
   330
  a B
  400
   LIVDKSRWQQGNVFSCSVMHEALHNYTQKSLSLSPGK 440 450 470
  Optimized Score
Matches
   440 450 460 X
LTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK
  250
   320
  390
  ORGANISM: Artificial Sequence
   100
   310
  468
998
0
   380
   0 0 0
  Initial Score
Residue Identity
   300
   SEQ ID NO 147
LENGTH: 470
  FEATURE
```

```
GPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSL [111] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1] | [1]
   GTQTY ICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPTLMISRTPEVTCVVVD
  90 340 350 350 360 360 SERVENDEVENWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS
  MGWSCIILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKASGYTFTSYWMQWVKQAPGQRLEWMGEIDP
  heavy
   Significance
Mismatches
  Designed
   9
  270
  US-09-499-662-89 (1-470)
US-09-408-646-14 Sequence 145, Application US/09408646A
  Description of Artificial Sequence: chain of humanized anti-Fas antibody
  20
   Optimized Score = 468
Matches = 466
Conservative Substitutions
  260
  Sequence 145, Application US/09408646A
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Haruyama, Hideyuki
APPLICANT: Makahara, Kaori
APPLICANT: Tamaki, Ituko
APPLICANT: Tahahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFRENCE: 990540/HG
CURRENT APPLICATION NUMBER: US/09/408,646A
CURRENT FILING DATE: 1999-09-30
EARLIER APPLICATION NUMBER: JP 10-276881
EARLIER FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 165
   40
  30
   ORGANISM: Artificial Sequence
  240
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```
GENERAL INFORMATION:
APPLICANT: Serizawa, Nobufusa
APPLICANT: Haruyama, Hideyuki
APPLICANT: Nakahara, Kaori
APPLICANT: Tamaki, Ikuko
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
   Initial
  CURRENT APPLICATION NUMBER: US/09/408,646A CURRENT FILING DATE: 1999-09-30 EARLIER APPLICATION NUMBER: JP 10-276881 EARLIER FILING DATE: 1998-09-30 NUMBER OF SEQ ID NOS: 165 SEQ ID NO 157 LENGTH: 470
  Sequence 157, Application US/09408646A
  OTHER INFORMATION: Description of Artificial Sequence: Designed OTHER INFORMATION: heavy chain of humanized anti-Fas antibody
  ORGANISM: Artificial Sequence
  US-09-499-662-89 (1-470)
US-09-408-646-15 Sequence 157, Application US/09408646A
  FEATURE:
290
  l Score -
e Identity -
   · · · 160
  230
   467
98%
   Optimized Score
  Conservative Substitutions
   Matches
   400
  467
   Mismatches
   Significance =
```

```
Gaps
                 Initial Score
Residue Ident:
  SEQ ID NO 9
  CURRENT APPLICATION NUMBER: US/09/408,646A CURRENT FILING DATE: 1999-09-30 EARLIER APPLICATION NUMBER: JP 10-276881 EARLIER FILING DATE: 1998-09-30 NUMBER OF SEQ ID NOS: 165
  GENERAL INFORMATION:
  Sequence 9, Application US/09408646A
   APPLICANT: Nakaĥara, Kaori
APPLICANT: Tamaki, Ikuko
APPLICANT: Takahashi, Tohru
TITLE OF INVENTION: Anti-Fas Antibodies
FILE REFERENCE: 990540/HG
  APPLICANT: Serizawa, APPLICANT: Haruyama,
  ORGANISM: Mus musculus
  LENGTH: 464
TYPE: PRT
  US-09-499-662-89 (1-470)
  US-09-408-646-9
   290
  290
  VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNS'I.
  VSHEDPEVKFNWYVDGVEVHNAKTKPREEQY,
  GPSVFPLAPSSKSTSGGTAALGCL
   GPSVFPLAPSSKSTSGGTAALGCLVi
        Identity -
   Haruyama,
  300
   Sequence 9,
              229
70%
  Nobufusa
  H1deyuk i
              Optimized Score Matches
Conservative Substitutions
  Application US/09408646A
           410
331
        Mismatches
                       Significance
```

1.24 107 26

